

the European Tertiary Aphididæ, although, according to Scudder, they resemble a species (*Genaphis valdensis*, Brodie) from the Jurassic of England. This *Genaphis*, however, has a short thick stigma, such as may be seen in some modern Chaitophorus, whereas the stigma in the Florissant forms is long and slender.

There are two ways in which the peculiarities of the Florissant Aphididæ might be explained. Either it might be supposed that they have undergone parallel evolution in a certain direction, giving rise to the present fauna, or it might be held that they represent an extinct series, driven out of existence by the Aphididæ of the Palæarctic fauna, which reached America in the late Miocene or early Pliocene. Supposing the original centre of Aphid evolution to have been Palæarctic (perhaps Asiatic), it may be that in late Secondary or early Tertiary times Aphididæ reached America, giving rise in due course to a series of genera, a good sample of which is preserved for us at Florissant. This would readily explain the peculiar fact of certain characters running throughout the series, these being derived from the original immigrants. While this evolution was proceeding, the old-world Aphides were undergoing developments of their own, leading directly to the present Aphid fauna of the north temperate regions. The generic uniformity (with few exceptions) of this fauna points strongly to its common source, and the European Tertiary Aphid fauna appears to corroborate the idea that this was Palæarctic. It remains only to suppose that when the Palæarctic Aphides reached America they were successful in ousting the endemic genera, which would have been totally lost to science had they not been preserved at Florissant. Perhaps, however, they have not been so completely lost, and it may be that aphidologists, with the palæontological facts in mind, will even yet discover some of the Florissant genera living in the mountains of Central or South America.

In this connection it may be well to direct attention to the very important paper by Dr. W. D. Matthew, lately published in the Bulletin of the American Museum of Natural History, June 30. In this paper Dr. Matthew discusses the evolution of the deer (*Cervidæ*), and concludes that these animals have successively dispersed from a local centre, driven southward before the competition of higher types evolved in the centre of dispersion. "These migrant types continue to evolve in certain respects, such as brain-capacity, which are advantageous in any habitat, but preserve most of their primitive characters as the environmental pressure is less in amount and more variable in direction." These are not mere suppositions; actual evidence is produced to show that the oldest genera are to-day the most southern, and it is suggested that had the connection between north and South America existed earlier, we might expect to find still more primitive forms in the southern continent. This law of successive radiation, as it might be termed, will undoubtedly throw new light on many problems of distribution and evolution. So far as it is found to be true, it will teach us that we must be cautious in thinking of the present home of the more primitive types of a group as the original centre of that group; that the occurrence of similar forms in two southern lands does not necessarily imply a former transoceanic southern bridge; or that the existence of a type in a particular region necessarily implies any special fitness to live in that physical environment.

As Dr. Matthew states, much has been written on the geographical distribution of modern animals from the general standpoint which he advocates,¹ but not enough has been done to interpret the palæontological facts in connection with the modern. Our daily increasing knowledge of the Tertiary fauna and flora promises much in this respect, and it is interestingly significant that independent studies of deer and plant-lice should lead to similar conclusions.

The Florissant Miocene Aphididæ are given above as numbering thirty. I have before me an additional one, the largest of any yet found. It is a species of *Anconatus*, differing from *A. dorsuosus*, Buckton, by the wholly pallid (pale ochreous) abdomen, and the anterior wing about

9 mm. long. The legs are remarkably large, the middle tibiæ, for instance, about $3\frac{1}{2}$ mm. long. This insect, found this year at Station 13 B, may be termed *Anconatus gillettei*, in recognition of Prof. C. P. Gillette's important researches on Colorado plant-lice. Detailed measurements will be given elsewhere.

If it is asked how the Palæarctic Aphids could possibly have routed the Nearctic ones, as suggested, the answer may be found in the supposition that the former brought with them certain parasites or diseases, to which they had become relatively tolerant, but which worked havoc among the American species, just as some European diseases of man have done in recent times when carried to American tribes.

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THE NATURAL HISTORY MUSEUM.

AS was recorded in last week's NATURE, on Tuesday, July 28, a deputation, which included Mr. F. Darwin (Cambridge), Prof. Cossar Ewart (Edinburgh), Prof. Sedgwick (Cambridge), Dr. Marr (Cambridge), Prof. Hickson (Manchester), Prof. Bourne (Oxford), and Prof. Graham Kerr (Glasgow), waited on the Prime Minister (The Rt. Hon. H. H. Asquith, K.C., M.P.) in support of a petition sent to the late Prime Minister last autumn requesting that advantage should be taken of the present vacancy in the directorship of the Natural History Museum to hold an inquiry into the methods by which the museum is governed. The deputation was introduced by Sir W. Anson, M.P., Mr. Rawlinson, M.P., and Sir H. Craik, M.P.

From the statements made by the members of the deputation it appears that the Natural History Museum is administered by the trustees of the British Museum, and that their principal librarian is responsible for the Natural History Museum at South Kensington as well as for the library and art collections at Bloomsbury. For half a century naturalists have been directing attention to the necessity for some change being made in the administration of the natural history department of the British Museum. In 1858 Mr. Darwin wrote to Sir Joseph Hooker that he could see many advantages in withdrawing natural science from the "unmotherly wing of art and archæology," but he thought that the "contempt for, and ignorance of, natural science" was so profound "among the gentry of England" that the time had not come when science could stand alone.

Some years later (1866), the situation appearing more favourable, the most distinguished men of science of the day (amongst others Darwin, Hooker, Huxley, Newton, and Wallace), in a memorial to the Government, expressed the opinion that "it is of fundamental importance to the progress of the natural sciences in this country that the administration of the national natural history collections should be separated from that of the library and art collections."

In 1874 a Royal Commission on "Scientific Instruction and the Advancement of Science" directed attention to the statements of witnesses that it was "unsatisfactory that the national collections should be managed by a body of gentlemen whose time is in most cases fully occupied by other important duties, and the majority of them are not selected with reference to any special qualifications for such a post." These commissioners, in their fourth report, recommended "that the occasion of the removal of the natural history collection to South Kensington" . . . "should be taken advantage of to effect the desired change, and that on their new site the collections should be removed from the control of the trustees of the British Museum." As this

¹ See, for instance, I. W. Taylor, "Monograph of the Land and Fresh-water Mollusca of British Islands," vol. i., pp. 389-90. (1900.)

commission was a strong and representative one—it included, amongst others, the Duke of Devonshire, Sir John Lubbock, Dr. Sharpey, Mr. Huxley, and Sir George Stokes—it was anticipated by naturalists that the Government would give effect to its recommendation. In this they were mistaken, for in the Bill passed in 1878 giving the trustees power to remove the natural history collections to South Kensington, no provision was made for a change in the administration of the Natural History Museum.

The recommendation of the Royal Commission having been ignored, the British Association for the Advancement of Science in August, 1878, urged the Government to reconsider the matter, but nothing was done.

After a lapse of ten years a representative body of scientific men, including Lord Kelvin, Sir G. Stokes, Sir M. Foster, Sir A. Rücker, Sir John Murray, Dr. Francis Galton, Sir Henry Thompson, Sir W. Turner, Sir Benjamin Baker, and Mr. A. R. Wallace, presented a memorial to the trustees in which it was stated that in their opinion it was "of great importance to the welfare of natural history that the principal official in charge of the national collections relating to this subject should not be subordinate in authority to any officer in the museum."

It may here be mentioned that a concession of some importance was made by the trustees in 1885. On the recommendation of the late principal librarian, Sir E. Bond, the office of superintendent of the natural history collections was in 1885 replaced by a new office, that of director, with new duties, new responsibilities, and new salary. But the concessions made in 1885 which gave the director of the Natural History Museum a position of comparative independence were deliberately revoked in 1898.

It seems that, though it is generally assumed that the trustees as a whole administer the Natural History Museum and are responsible for the expenditure of the very considerable sum (56,000*l.*) annually voted by Parliament, the museum is actually controlled by a standing committee, while the director, inferior officers, and assistants down to servants are appointed by the three principal trustees. As there are forty-nine trustees, the board cannot act effectively as a single body, and, as the 1874 commissioners state, it is "singularly inappropriate that the three important personages who are the principal trustees, occupied as they are in the discharge of the highest functions in Church and State, should be burdened with the duty of making appointments to offices of every grade in the British Museum."

Prof. Sedgwick, in referring to the memorial presented last August to the late Prime Minister, said that zoologists thought it desirable to at once call the attention of the Government to the desirability of instituting an inquiry into the methods of administration of the Natural History Museum, and that, if necessary, a widely signed memorial could be sent later on. In concluding a very full statement, Prof. Sedgwick said:—

"We are here to ask for a full official inquiry into the organisation and administration of the Natural History Museum with a view to a reasonable treatment of the matter in the immediate future by His Majesty's Government."

Mr. Francis Darwin especially referred to the subordination of Cromwell Road to Bloomsbury. He said:—

"Quite apart from the welfare of the Natural History Museum, it seems unfair to expect of the principal librarian that he should be responsible for Cromwell Road in addition to his other heavy responsibilities. Nor can it be to the advantage of the British Museum that its

principal officer should be so occupied. But it is when we look at the other side of the question that the faultiness of the arrangement becomes fully obvious. To choose a man distinguished for his technical knowledge and then to fail to give him reasonable freedom in the employment of his training and experience seems as bad a plan as it is possible to conceive.' . . . 'I believe I am right in saying that when the late director was appointed his freedom was curtailed. It was, I think, unavoidable that in these circumstances difficulties should arise, and I feel very strongly that we ought to make the recurrence of such difficulties impossible; and this can only be done with certainty by making the Natural History Museum an independent unit.'"

This view was supported by Prof. Bourne, who stated that

"the Natural History Museum will not be placed upon a satisfactory footing until it is placed under the control of a body of trustees separate from that which is responsible for the control of the British Museum at Bloomsbury."

Prof. Hickson pointed out that, notwithstanding the representations made by men of science during recent years,

"no changes or reforms had been effected, and the administration is practically the same now as it was before the collections were removed from Bloomsbury," and that for seven months "the museum has been deprived of the services of both a scientific director and a keeper of zoology."

Prof. Ewart directed attention to the present unsatisfactory method of appointment of the director and of the subordinate members of the staff of the Natural History Museum; Prof. Kerr said that, owing to the dissatisfaction which exists amongst men of science, it is "essential to hold a careful inquiry into the whole question of the organisation and administration of the Natural History Museum before coming to a decision as to the remedial measures to be adopted," and Dr. Marr directed attention to the inadequate representation in the museum of those important branches of geology which are distinct from botany and zoology.

The Prime Minister, according to an official report which has been supplied, replied as follows:—

He expressed his profound satisfaction at meeting so many eminent men of science. He pointed out that, as regards the administration of the museum, the trustees are a statutory body with whom the Government were powerless to interfere. He confessed himself still unable to grasp in what way the museum failed to perform its functions. The arguments advanced by so many of the deputation as to the management by the trustees applied equally to the Bloomsbury museum. The trustees, men of wide experience and great distinction, were equally cognisant of natural history and archæology. He announced that the trustees were about to appoint a keeper of zoology, and that it was not intended to abolish the directorship, but only to wait to ascertain who was the best man for this responsible position. He sympathised with the view that the director should have a free hand in the management of his department, and promised to convey to his fellow-trustees of the British Museum all that the deputation had suggested.

In reply to the Prime Minister's remarks, it may be pointed out that, had the Natural History Museum come into existence during the later half of last century it would doubtless, like the American Museum of Natural History and other recently established museums, have been placed under a separate board of trustees. But for the want of an appreciation of science in England, the request for an independent position for the Natural History Museum by men of science would have been almost certainly granted when the natural history collections were removed from Bloomsbury to South Kensington.